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NEWS

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Newsletter of the N.H. Department of Environmental Services

September/October 2001

Commissioner Robert Varney leaves DES to head EPA's New England office

After twelve years at the helm of the N.H. Department of Environmental Services, Bob Varney recently stepped down as DES Commissioner to become the Administrator for the U.S. Environmental Protection Agency's Region I, an area that encompasses the six New England states. Appointed by President George W. Bush, Bob will be working closely with EPA Administrator Christie Todd Whitman to help shape environmental policies and programs as the country begins the new century.

Outgoing DES Commissioner Bob Varney enjoys a moment with friends at a farewell gathering in Concord.

Respected for his active and far-sighted leadership, Bob Varney "consistently approached New Hampshire's environmental challenges with vision and long-term perspective," noted Governor Jeanne Shaheen. "During the course of his tenure, the State of New Hampshire received national acclaim for such programs as lakes protection, drinking water protection, air quality control, underground storage tank management, toxic release reduction, brownfields redevelopment, and the closure of unlined landfills. Under his dynamic and tireless leadership, he initiated and oversaw the implementation of a host of strategies and programs designed to protect New Hampshire's public health and environment. These initiatives included mercury and dioxin reduction, watershed protection, river quality assessments, clean marine engines, clean electric power, and habitat conservation."

The Governor also observed that "Bob Varney was particularly successful at forging bonds of cooperation with the public, private, and non-profit sectors, while maintaining a constant focus upon the ultimate goal of environmental protection."

COMMISSIONER, *continued on page 2*

Marine engine initiative bringing quick results

Innovative public-private partnership means cleaner air and water

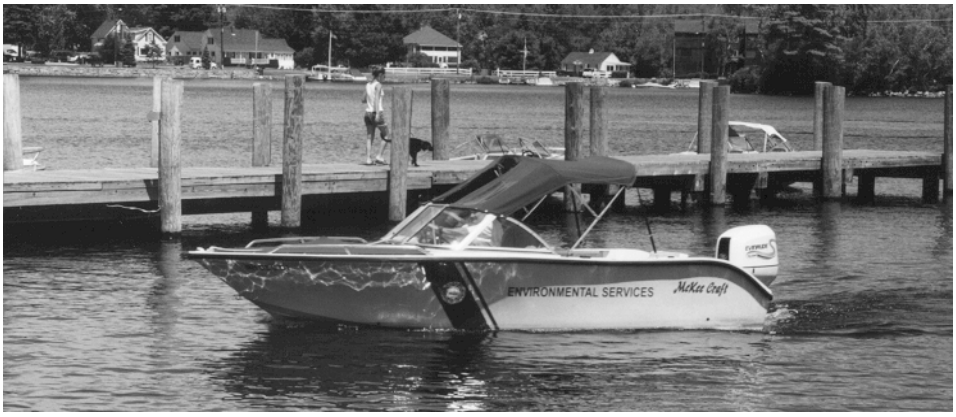
Gov. Jeanne Shaheen, joined by Jeff Thurston of the N.H. Marine Trades Association and former DES Commissioner Bob Varney, recently highlighted the results of the innovative New Hampshire Clean Marine Engine Initiative, which is increasing the number of cleaner-burning, quieter marine engines sold in New Hampshire.

"Our lakes, our rivers and our ponds are critical to our state's economy, quality of life and identity. But none of us want to swim, or have our children swim, in water slicked with gasoline from boats or take deep breaths of air filled with the fumes of a passing motorboat.

MARINE ENGINES, *continued on page 2*

As DES Commissioner Bob Varney and DES's Lakes Coordinator Jacquie Colburn look on, Gov. Shaheen presents a commendation plaque to Matt Young of Melvin Village Marina, one of 33 boat dealerships honored for their successful participation in the Clean Marine Engine Initiative.

MARINE ENGINES, *continued from page 1*



DES's own boats now sport the cleaner-burning, quieter, four-cycle outboard marine engines.

And boaters don't want that either," Gov. Shaheen said. "That's why we sat down last year with the N.H. Marine Trades Association to work out an agreement to help protect our waterways. And in just one year, we are already seeing results beyond our expectations from this first-in-the-nation partnership."

The Clean Marine Engine Initiative began in February 2000 with the signing of an agreement between DES and marine engine dealers from across the state. It is a strategy to accelerate the sale and use of low-pollution two-cycle (direct injection) and four-cycle outboard marine engines in New Hampshire. The federal government will begin mandating the sale of the cleaner engines in 2006.

Rather than wait until then, the Association, through its agreement with DES, agreed to encourage its member dealers and other dealers in the state to sell the newer engines much sooner. The goal was for 50 percent or more of all sales in 2000 to be the new engines, and 75 percent or more by the end of 2001. That first-year goal was far surpassed. In 2000, 65 percent of sales for participating dealers were for the new cleaner engines.

This voluntary agreement is the first of its kind in the country, and in April 2001, the Initiative was presented with an Environmental Protection Agency Region I Environmental Merit Award.

The new engines are more fuel efficient, quieter, reduce fewer air emissions and discharge less pollution into the water.

Most outboards and personal watercraft still have conventional carbureted two-stroke marine engines. According to the N.H. Department of Safety, as of 2000, there were approximately 100,000 watercraft registered in New Hampshire and an additional 20,000 or more from other states using our waters. Approximately 60 percent had outboard marine engines.

Depending upon their age, conventional carbureted engines can be very inefficient in their use of gasoline and oil, and they are the second-largest contributor of hydrocarbon emissions from exhaust into both the air and water. Unlike automobile emissions, which exhaust to the air, marine engines exhaust into both the air and water. Unburned gasoline released into lakes and rivers contributes to elevated levels of benzene, MtBE, and other toxic gasoline components in waterbodies where boating and personal watercraft are allowed.

As of May 2001, thirty-three marine dealerships have signed onto this very successful voluntary agreement.

For more information about the Initiative, please contact Jacquie Colburn, DES, at 271-2959. ■

COMMISSIONER, *continued from page 1*

Bob was appointed to the DES Commissioner post in 1989, two years following the agency's statutory creation from four previously separate state agencies. In bidding him farewell, DES Assistant Commissioner Dana Bisbee commented, "In his twelve years at DES, Bob brought this agency through the difficult period of adolescence into mature adulthood. He has been an unstinting supporter of this agency's work and its work force." Bisbee noted that "the tremendous growth in high quality work under Commissioner Varney has resulted in greater protection for New Hampshire's environment and the health of its citizens."

As Bob begins his new role, facing exciting challenges and opportunities across the New England region, the staff and administration at DES join with his many friends from across our state in wishing him well, knowing that he leaves behind a legacy of accomplishment and great contributions to the landscape and people of New Hampshire. ■

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Environmental News is a bimonthly publication of the N.H. Department of Environmental Services.

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Acid rain continues to fall in the Northeast

by Kathy Brockett, Air Resources Division

Many people believe that the problem of acid rain was solved as a result of emission reduction requirements in the 1990 Clean Air Act Amendments. However, research from study sites throughout the northeastern United States, including the Hubbard Brook Experimental Forest in New Hampshire's White Mountain National Forest, demonstrates that acid rain, more accurately called acid deposition, is still a significant problem in the northeastern United States and eastern Canada.

Acid deposition begins when sulfur dioxide, nitrogen oxides and ammonia are emitted into the atmosphere from the burning of fossil-fuels and are transformed into sulfuric acid, nitric acid and ammonium. These acids and acidifying compounds are then delivered to the earth's surface in rain, snow, fog, clouds, and atmospheric particles where they move through soil, vegetation, and surface water. The result is a number of adverse ecological effects, including alteration of soils, decline of certain tree species, and impairment of water quality in lakes and streams, especially in acid sensitive areas like northeastern United States and eastern Canada.

Sulfur dioxide (SO_2), nitrogen oxides (NOx) and ammonia are emitted by the burning of fossil-fuels (primarily from electricity generating power plants and transportation sources) and agriculture activities. While significant reductions of sulfur dioxide emissions have taken place in the region and nationwide, resulting in reductions in wet sulfate deposition levels, remaining emissions of both SO_2 and NOx, particularly those generated in the Midwestern U.S. and central Canada, continue to negatively impact the resources of New Hampshire, New England and eastern Canada.

EPA has concluded that additional reductions of SO_2 and NOx are needed just to prevent further acidification of lakes in areas like the Adirondacks. A recent report from the Hubbard Brook Research Foundation clearly supports this conclusion and states: "Recent research shows that the ability of some ecosystems to neutralize acid deposition has diminished over time, delaying the recovery of forests, lakes, and streams. Moreover, while the Clean Air Acts of 1970 and 1990 have improved air quality somewhat, the emissions reductions mandated in 1990 are not likely to bring about full ecosystem recovery in sensitive areas of the Northeast."

Recognizing that acid deposition continues to be a concern for which a regional approach on research and strategic action is required, the New England Governors and Eastern Canadian Premiers (NEG/ECP) adopted an Acid Rain Action Plan in 1998. New Hampshire is an active participant in this regional plan, which outlines specific steps to ensure progress in mitigating the effects of acid deposition, including recommendations to reduce annual SO_2 emissions by 50 percent and NOx emissions by 20-30 percent beyond existing requirements by 2007 and 2010, respectively. Other significant efforts supported by New Hampshire and currently underway under the Action Plan include installation of a regional fine particulate matter monitoring network, implementation of a Forest Mapping Project to determine the critical thresholds for forest soil acidification in Northeastern Canada and United States, and development of communications materials to revitalize public awareness of the acid rain problem.

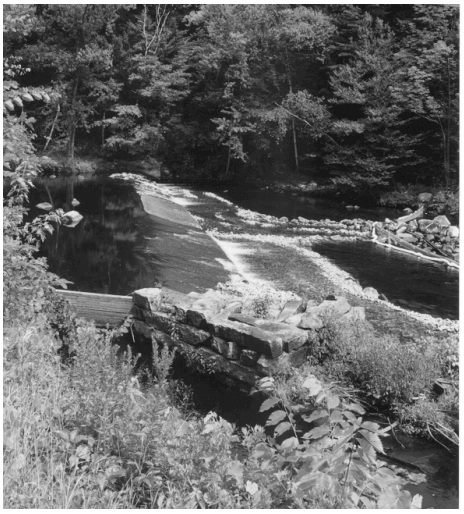
To help New Hampshire implement the NEG/ECP Acid Rain Action Plan and achieve its goals, New Hampshire developed its Clean Power Strategy in January 2001 to reduce emissions of multiple pollutants from fossil-fuel fired power plants. Under the new strategy, the state's three fossil-fuel power plants will have five years to reduce emissions of sulfur dioxide by 75 percent and nitrogen oxides by 70 percent. Legislation to implement the Clean Power Strategy was introduced and debated during the 2001 legislative session. Further action is expected during the 2002 session. ■

Research from study sites throughout the northeastern United States, including New Hampshire's White Mountain National Forest, demonstrates that acid rain, more accurately called acid deposition, is still a significant problem.

New Hampshire's first dam removal begins on the Ashuelot River

Gov. Jeanne Shaheen helped restore a free-flowing section of the Ashuelot River recently as she participated in breaching the McGoldrick Dam in Hinsdale, the first dam to be removed in New Hampshire. Several federal, state and local representatives and conservation organizations joined the Gov. Shaheen for the historic event.

"Throughout New Hampshire's history, rivers – and their dams – have played an important role in New Hampshire's economic prosperity and quality of life. Dams, like the McGoldrick Dam, fueled our state's leap into the industrial age," Gov. Shaheen said. "But today, many of these dams are obsolete, uneconomical, and in some cases public safety hazards.



The time has come to give something back to the rivers that have given so much to our economy and our history. Removing this dam will restore our fisheries, improve water quality, and create new recreational opportunities, which will allow this river to continue to contribute to our quality of life and economy.

"The McGoldrick Dam will be the first dam removed in the state of New Hampshire, allowing the Ashuelot River to run free for the first time in 173 years," said Gov. Shaheen. "This move will help make it possible for thousands of American shad, blueback herrings and Atlantic salmon to return once again in full force – after too long an absence – to the Ashuelot River, a tributary of the Connecticut."

The removal of the McGoldrick Dam is made possible through a collaborative public-private initiative, called the New Hampshire River Restoration Task Force. The goal of the task force is to remove old, obsolete and uneconomical dams, and thus eliminate public safety hazards, restore fisheries, improve water quality, and create new recreational opportunities.

The Ashuelot River is one of a select number of rivers specially designated by the New Hampshire legislature under the State Rivers Management and Protection Program. New Hampshire has made removing obsolete dams a priority, and it is only the second state to create a state position specifically to coordinate river restoration through dam removal.

The 6-foot high, 150 foot-long McGoldrick Dam and its associated canal were built in 1828 and provided various local businesses with power for more than a century. The presence of the dam and canal transformed Hinsdale from a quiet agricultural town into a small, but characteristic New Hampshire manufacturing village, one of the busiest in the Ashuelot River watershed. The privately owned dam is now obsolete and in poor condition. Its removal is being done with the consent of its owner. ■

Gov. Shaheen addresses those gathered to witness the breaching of McGoldrick Dam near Hinsdale Village. (At right) With DES equipment operator John Collins at her side, the Governor operated the controls of a backhoe to take the first steps in breaching the dam. The old impoundment was removed to create a free-flowing stretch of the Ashuelot River, allowing anadromous fish like American shad and Atlantic salmon to again migrate upstream from the nearby Connecticut River.

New Hampshire once again leads Northeastern & Mid-Atlantic states in reducing smog forming NOx emissions

Percent Reductions of NOx Emissions Between 1990 and 2000 in the Eight OTC States

OTC State	1990 Baseline Ozone Season NOx Tons	1999 Ozone Season NOx Tons	1999 Percent Reduction	2000 Ozone Season NOx Tons	2000 Percent Reduction
New Hampshire	**14,589**	**3,463**	**76.3%**	**2,056**	**85.9%**
Rhode Island	1,099	274	75.2%	288	73.8%
New Jersey	46,963	15,390	67.2%	14,630	68.8%
Massachusetts	41,330	17,293	58.2%	14,324	65.3%
Delaware	13,510	6,160	53.5%	5,256	61.1%
Connecticut	11,203	5,830	47.6%	4,697	57.8%
Pennsylvania	203,181	79,166	61.0%	87,329	57.0%
New York	85,642	47,267	44.8%	43,583	49.1%
TOTALS	**417,444**	**174,843**	**58.1%**	**172,163**	**58.8%**

SOURCE: Ozone Transport Commission

The results for the 2000 ozone season, which were released in May, indicate how well the eight participating states in the Ozone Transport Commission (OTC) are doing in fulfilling their commitment to reduce smog-forming nitrogen oxide (NOx) emissions under an agreement signed in 1994.

Data recently released by the OTC, show that during 2000, as in 1999, New Hampshire outpaced all other Northeast and Middle Atlantic states in achieving NOx reductions from power plants during the summer ozone season. Compared to 1990 OTC baseline levels of 14,589 tons, New Hampshire's large power plants emitted 3,463 tons of NOx during 1999 and only 2,056 tons of NOx during 2000 – a reduction of 76.3 and 85.9 percent respectively from 1990 levels. The average NOx reduction achieved by all Northeast and Mid-Atlantic states participating in the regional NOx reduction strategy was 58.8 percent.

While the additional reduction in 2000 was mainly attributable to an outage at one of the plants, the underlying reduction of over 76 percent is attributable to Public Service of New Hampshire's installation of extensive pollution control devices. He noted that the state's dramatic drop in NOx emissions may continue as new natural gas power plants come on line in the next year.

"Clearly, New Hampshire once again performed well above the average in achieving NOx reductions from large utilities," commented DES Air Resources Division Director Ken Colburn. "We will continue to pursue measures to effectively reduce NOx emissions from all sectors within New Hampshire, power plants, factories, and motor vehicles alike. Simultaneously, we will work aggressively to insist that upwind states do the same. NOx emissions are a significant health and environmental concern. They are the major cause of ground-level ozone, more commonly referred to as smog. They also contribute to fine airborne soot particles, acid rain, climate change, and degradation of lakes and ponds." ■

Large groundwater withdrawal rules adopted

In May, DES adopted a set of rules critical to ensuring the long-term protection of New Hampshire's groundwater resources. The rules apply to all new groundwater withdrawals that exceed 57,600 gallons over any 24-hour period.

The statute and rules require that an applicant for a new large groundwater withdrawal develop a "conservation management plan' that demonstrates a need for the proposed withdrawal. The applicant must also assess the impacts associated with the proposed withdrawal to environmental resources and existing water users, as well as mitigate any adverse impacts that may occur as a result of a new large withdrawal.

For more information about the new Large Groundwater Withdrawal Rules, Env-Ws 387 and 388, or to obtain a copy of these regulations, visit DES's website at www.des.state.nh.us/dwspp/lgwith.htm. ■

P2 Program initiates marina project

Updated BMP manual a key element

by Jen Drociak, NH Pollution Prevention Program

Marinas play a critical role in helping to ensure good water quality in New Hampshire's lakes, rivers, and coastal estuaries. Staff from DES's Pollution Prevention Program and Watershed Management Bureau recently visited four New Hampshire Lakes Region marinas to gain input from them before revising DES's 1995 manual *Best Management Practices for New Hampshire Marinas.* The staff also provided the marinas with up-to-date pollution prevention information prior to this year's boating season. The on-site visits included a review of each marina's current and potential pollution prevention practices.

The revised manual will be available in late fall 2001 or early 2002, and it has been expanded to include management recommendations for the following topics: vessel and engine maintenance and repair, used oil, solvent waste streams, absorbents/shopwipes, parts-washing solvent wastes, floor drains, wastewater and stormwater, vessel cleaning, vessel sewage, scrap metal, antifreeze, batteries, mercury-containing lamps, storage tanks, nutrients, exotic plants, and low-polluting outboard marine engines.

Follow-up surveys will be conducted with marinas in 2002. DES will attempt to measure implementation of the suggested BMPs and other recommendations. Follow-up to the manual distribution will include assessment of the usefulness of the manual and number of pollution prevention projects or BMPs implemented at each marina.

For more information about the N.H. Marina Project, please contact Jen Drociak, N.H. Pollution Prevention Program, at 271-0878 or e-mail nhppp@des.state.nh.us. ■

Silver Sands Marina in Gilford. Photo by Jacquie Colburn.

Velcro agrees to largest civil penalty in state's history for air pollution violations

In a recent settlement, Velcro USA, Inc. of Manchester has agreed to settle the largest pollution claim in the State's history for violations of state air pollution laws. The settlement, which was reached with the full cooperation of Velcro, totals $700,000 in the form of cash payments and pollution reductions from Velcro's Brown Avenue, Manchester plant.

The state alleged that Velcro had violated numerous and significant requirements contained in the state rules and air permits for Velcro's plant operations. The alleged violations included Velcro's failure to properly operate pollution control equipment designed to reduce emissions of nitrogen oxides (NOx), which is a precursor to ozone, or smog. The suit also alleged that Velcro did not meet state permit requirements for air toxics emissions, opacity, and control of NOx and volatile organic compounds (VOCs), another precursor to smog.

Under the terms of the consent decree approved by the court, Velcro agreed to pay $175,000 in cash to the State and to several charitable organizations. The remaining $525,000 is to be paid in the form of "supplemental environmental projects" at two nonprofit organizations and at Velcro's plant that will significantly reduce air emissions from Velcro's Manchester facility. In particular, Velcro has agreed to reduce its NOx emissions beyond current regulatory requirements, from 117 tons per year to 40 tons per year by June 30, 2003, with significant reductions occurring yearly. Velcro has also agreed to spend $100,000 on the purchase and installation of a "selective catalytic reduction" system that will further reduce NOx emissions from the plant.

Attorney General Philip T. McLaughlin said "This case represents the serious attention that this office gives to violations of New Hampshire's air pollution control laws. The magnitude of the civil penalty to be paid by Velcro reflects the seriousness of the violations, but the settlement also reflects Velcro's willingness to work with the State to be proactive in fashioning a remedy where the end result is cleaner air for our citizens."

"We're especially pleased that this settlement will lead to Velcro substantially reducing its releases of nitrogen oxides," said Assistant Commissioner Dana Bisbee. He noted, "The benefit of eliminating over 75 tons of NOx is equivalent to taking about 4,000 vehicles, with their associated tailpipe emissions, off of New Hampshire's roadways, improving the state's air quality and the health of its citizens." ■

State's Largest Newspapers Conclude Ten-Year Recycling Initiative
Their Average Recycled Content Grows From 6 Percent To 33 Percent

After ten years, New Hampshire's eight largest newspapers have concluded their voluntary pact to increase the recycled paper content of their newsprint to 40 percent. Under the 1991 agreement, the newspapers agreed to meet goals set by DES and the N.H. Daily Newspaper Association to use recycled fiber in their newspapers beginning in 1993. The combined average for all eight papers reached 33 percent, up from 6 percent used in 1993. Three of the newspapers – *Concord Monitor*, *The Keene Sentinel*, and *Valley News* – met the 40 percent goal, with *The Keene Sentinel* achieving the highest recycled content of over 50 percent. The other participating newspapers were *The Eagle Times, Foster's Daily Democrat, The Telegraph, Seacoast Newspapers*, and *The Union Leader*.

"We're pleased with the efforts of these eight newspapers who voluntarily agreed to achieve ambitious goals set forth ten years ago," said Philip J. O'Brien, Director of the DES Waste Management Division. "In 1991, few newspapers used any recycled content in their product, even though tons of papers were ending up as waste material daily. Today, all eight of the state's newspapers in the agreement purchase and use recycle content regularly. In addition, many communities participate and benefit in the process by selling their recycled newspapers to the paper companies that manufacture clean recycled newsprint.

"It shows that the newspaper publishers can be a significant force in building demand and developing markets for recycled newsprint," Varney noted, "without compromising the quality and cost of their product. It also demonstrates the importance and power of voluntary cooperation between the public and private sectors in achieving environmental goals."

The main reasons cited for not being able to achieve the 40 percent goal include the high cost and availability of high recycled content newsprint, cooperative agreements, and equipment restrictions. Despite these issues, the participating newspapers have said that they will continue to consider recycled content when making purchasing decisions.

The newspaper initiative was part of a larger effort by DES and the N.H. Legislature to promote the use of recycled products by the public, private, and non-profit sectors.

For more information, please call DES Recycling Coordinator Marc Morgan at (603) 271-3712. ■

Baker Hill Golf Club penalty action settled

A settlement was reached recently in a penalty action against the Baker Hill Golf Club in Newbury stemming from violations of the State's wetlands and water pollution laws.

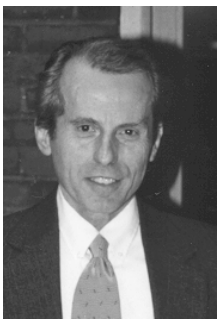
In 1999, DES issued a permit to Baker Hill for the construction of a golf course in Newbury. From the fall of 1999 though the summer of 2000, DES documented numerous violations of the State's laws and rules that protect water quality at the project, which resulted in sediment being washed into wetlands on the property as well as into Blodgett Brook and the Blodgett Landing area of Lake Sunapee. DES issued an administrative order in June 2000, which was released in mid-July based on Baker Hill's compliance. Based on subsequent violations, DES issued a second administrative order in August 2000 and initiated discussions with Baker Hill regarding a penalty.

As a result of negotiations between the State and Baker Hill, Baker Hill agreed to pay a total administrative fine of $48,000 in settlement of DES's claims. Pursuant to the terms of the agreement, Baker Hill will pay a cash penalty of $15,000 to the State and will pay $8,000 to the Town of Newbury to fund improvements to the roadside drainage ditch along Old County Road South. Baker Hill also will pay $6,000 to the Lake Sunapee Protective Association (LSPA) for the purpose of developing a three-year education campaign, and will pay $9,000 to the LSPA for the purpose of monitoring water quality and plant growth in the Blodgett Landing area of Lake Sunapee over a three-year period. Baker Hill also will place $10,000 into escrow for restoration or remediation, with any remaining balance paid to the LSPA to be used for projects designed to improve water quality.

For further information, please contact Gretchen Rule, DES Legal Unit, or Ridgely Mauck, DES Water Division, at (603) 271-3503. ■

DES financial operations chief retires

After serving as the Administrative Services Administrator for DES and its predecessor agency for twenty-nine years, Ken Morrissey is moving on to enjoy a well deserved retirement. Responsible for the agencies' financial operations, Ken's pivotal role involving DES's budget preparation and daily financial activities contributed greatly to carrying out the State's important environmental goals.



At a farewell gathering with his fellow co-workers, Ken was cited with proclamations from both Governor Shaheen and DES Commissioner Robert Varney. A man of integrity, commitment, character, and ability, Ken was much respected by people throughout state government.

As he now enters a new chapter in his life, Ken can look back on an outstanding career as a truly dedicated state employee, one who well served the citizens of New Hampshire. ■

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